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ception, lost their egg-sacs. It is possible that the males would be more frequently met with in June or July.

EXPLANATION OF PLATE III.

(The drawings are all outlined by Zeiss camera lucida, and reduced by one-third.)

Fig. 1, Gundlach $1\frac{1}{2}'' \times$ Zeiss Oc. II.

Figs. 2, 3, 8, Zeiss A \times Zeiss Oc. II.

Figs. 4, 5, 6, 7, 10, Zeiss D \times Oc. II.

Fig. 9, Zeiss Hom. Im. $\frac{1}{8}$ th \times Oc. II.

FIG. 1.—*Myicola metisiensis* Ramsay Wright, ♀ from above.

“ 2.—Head and part of 1st thoracic segment from below. *r*, rostrum, *a*¹, anterior, *a*², posterior antenna; *la*, labrum; *mn*, mandible; *mx*, maxilla; *mxp*¹, anterior maxillipede; *mt*, metastoma; *st*, the somewhat complicated sternal apparatus of the 1st pair of natatory feet.

“ 3.—Posterior antenna, indicating the chitinous framework of the different joints.

“ 4.—Maxilla.

“ 5.—Anterior maxillipede.

“ 6.—First pair of natatory feet.

“ 7.—Fifth pair.

“ 8.—♂ from above.

“ 9.—Mandible of ♂.

“ 10.—Posterior maxillipede of ♂.

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ON THE RUDIMENTARY HIND LIMB OF MEGAPTERA LONGIMANA.¹

BY JOHN STRUTHERS, M. D.

THE author remarked that the interest attaching to the structure of whales depends largely on the fact that they present numerous rudimentary structures. Megaptera is extremely rare on British coasts. This one appeared in the Firth of Tay, and after sporting for some weeks in sight of the inhabitants of Dundee, was at last mortally wounded, and towed ashore dead, at Stonehaven, near Aberdeen, on January 8, 1884. It was a male, forty feet in length. The pectoral fin, the chief character of this species, was twelve feet in length. The parts containing the rudimentary hind limbs were removed and carefully examined in the anatomical rooms at Aberdeen. The presence of a rudimentary

¹ Abstract of a paper read before the biological section of the British Association for the Advancement of Science at Montreal, August, 1884.

thigh bone in this species had been discovered many years ago by the late Professor Reinhardt, of Copenhagen. The object of the author's inquiry was to ascertain the precise anatomical relations of this rudimentary structure, and if possible to throw some light on its meaning. For comparison the author exhibited to the section the rudimentary bony thigh bone, about the size of a hen's egg, which he had found in a great fin-whale, the razor back (*Balænoptera musculus*), in 1871, and a series of specimens of the more developed thigh bone and cartilaginous tibia, which he had dissected in the Greenland right whale (*Balæna mysticetus*), and his drawings of the ligaments and muscles connected with these parts in the right whale (*Four. of Anat. and Phys.*, Jan. 7, 1881).

In this *Megaptera* he found the thigh bone to be entirely composed of cartilage, of a conical shape, the length five and a-half inches on the right side, four inches on the left. It was encased in a mass of fibrous tissue. This fibrous case was connected internally to its fellow of the opposite side; superficially and on the outside to the posterior pelvic muscular mass; and anteriorly, passing from the thigh bone itself, was a special band appearing like a fibrous prolongation of the bone. The thigh bone rested loosely on the pelvic bone without articular surface, but was bound loosely to the latter by a strong posterior ligament, and by a weaker ligament in the position of the hip joint in the right whale. A muscle about the size and shape of a forefinger, within a ligamentous tube, connected the thigh bone backwards to the great interpelvic ligament. This was the only muscular structure directly connected with the thigh bone. It would retract the bone. The fibrous connections of the bone were mainly adapted to resist outward and forward traction.

The author said, that looking to all these facts, the conclusion to which we must come is, that the thigh bone in *Megaptera* is a rudimentary structure, a vestige of a more complete limb possessed by some ancestral form from which the *Megaptera* is descended.

The skeleton of this *Megaptera* he hoped would be ready to be inspected by the members of the British Association at the meeting in Aberdeen in September, 1885.